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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,205	09/24/2001	Goro Tamai	GP-300567	6870

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EXAMINER	
AVERY, BRIDGET D	

ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/961,205	TAMAI ET AL.	
	Examiner	Art Unit	
	Bridget Avery	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The amendment filed by applicant on September 29, 2003 is acknowledged and has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long, III et al. (US Patent 6,367,570) in view of Yanase et al. (US Patent 6,459,166).

Long, III et al. teaches a propulsion system controller (402) for use in a hybrid vehicle including: a motor/generator (200) for providing starting force to an internal combustion engine (150) in a first mode of operation and for generating an electrical charge in a second mode of operation (as described in column 10, lines 25-30); a first operating system, the first operating system varying the prime pulse to an internal combustion engine and the starting force applied to the internal combustion engine (150) by the motor/generator (200) (as described in column 9, lines 31-44), the operating system varying the starting force and the prime pulse according to engine coolant temperature and battery state-of-charge (see column 9, lines 18-26); a second operating system, the second operating system varying the state of operation of the

motor/generator (200) during a starting sequence of the internal combustion engine (150), the first operating system and the second operating system instructing the motor/generator (200) to operate in between the first and the second modes of operation (between the generator and the neutral mode as described in column 10, lines 33-38); a third operating system, the third operating system varying a degree of electric power being used to drive the vehicle, the degree of electric power corresponding to sensed vehicle operating conditions (see column 10, lines 39-55); a means (456, 458) for sensing the state-of-charge of an electric storage medium (400), the means for sensing state-of-charge of the electric storage medium (400) being operated by the first operating system; and a means (see column 9, line 20) for sensing the temperature of an engine coolant of an internal combustion engine (150), the means for sensing the temperature of the engine coolant being operated by the first operating system. The method of varying the state of propulsion and the method of controlling a hybrid powertrain, which includes: determining if an engine starting command has been requested; sensing the state-of-charge of an electric storage medium; sensing the temperature of an engine coolant of an internal combustion engine; sensing the temperature of the electric storage medium; determining if a fault condition is present; sensing the operating condition of a motor/generator; controlling the motor/generator operation based upon the state-of-charge and the temperature of the internal combustion engine; varying the starting speed of the motor/generator in the first mode in response to the state of charge of the electric storage medium; and varying a prime

pulse to the internal combustion engine in response to the state of charge of the electric storage medium, is also taught by Long, III et al. See column 11, lines 21-65.

Long, III et al. lacks the teaching of varying a degree of electric power to correspond to the temperature of the engine coolant.

Yanase et al. teaches a control device including a generator where the load varies according to the engine temperature. The temperature of the engine is determined by the temperature of the engine coolant.

Based on the teachings of Yanase et al., it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to modify the system of Long, III et al. to vary the load of the generator according to the temperature of the engine coolant to maintain an engine revolution speed at a predetermined low revolution speed, as taught in column 1, lines 56-58.

3. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Long, III et al. ('570) and Yanase et al. ('166) as applied to claim 29 above, and further in view of Yano et al. (US Patent 5,862,497).

The combination of Long, III et al. and Yanase et al. teach the features described above.

The combination of Long, III et al. and Yanase et al. lack the teaching of the step of controlling the transmission based upon the operations of the motor/generator.

Yano et al. teaches a control unit (16) for controlling a transmission (4).

Based on the teachings of Yano et al., it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to modify the combination of Long, III et al. and Yanase et al. to include the step of controlling the transmission for optimum vehicle performance.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Deguchi et al. shows a driving force control system for automotive vehicle.

King et al. shows an energy management system for hybrid vehicle.

4. Any inquiry concerning this communication should be directed to Bridget Avery at telephone number 703-308-2086.

Avery

December 29, 2003

BRIAN L. JOHNSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

12/29/03